REMARKS

In the August 10, 2005 Office Action, claims 1-3, 6-13, 17, and 18 were rejected, and claims 4, 5, and 14-16 were deemed objectionable. Applicant declines to amend the claims at this time. Reconsideration of the application is respectfully requested in view of the following remarks.

Objected Claims

The Office objected to claims 4, 5, and 14-16, but indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks the Examiner for this recognition. For the reasons discussed below, however, Applicant declines to amend these claims.

§102 Rejection

Claims 11, 17, and 18 stand rejected under 35 U.S.C. §102(e) as being anticipated by Luo et al., USPA 2440/0114768 (hereinafter "Luo"). Applicant traverses this rejection.

Luo discloses a noise cancellation system that can be used to cancel the noise generated by an electric motor or generator. FIG. 1 of Luo is representative of the Luo system. The Luo system strives to cancel the noise produced by a noise source (e.g., a motor) 102. In lieu of a microphone or equivalent sensor, the Luo system utilizes a phase controller 104 that is connected to the noise source 102. The phase controller 104 generates a pulse signal that is amplified to drive an actuator (e.g., a speaker) 108. The actuator 108 generates an audio signal that is supposed to cancel the noise generated by the noise source 102. Notably, the noise source 102 and the actuator 108 are distinct and separate components in the Luo system.

Luo simply does not teach or suggest the invention recited in claims 11, 17, and 18. Claim 11, for example, recites the processing of a noise measurement to produce a control signal for the motor as a function of the noise. Claim 11 also recites the step of "providing the control signal to the motor to thereby adjust an acoustic signal produced by the motor, wherein the acoustic signal is configured to produce a tone that cancels at least a portion of the noise." In contrast, the Luo system does not generate a control signal for the noise source (motor). Moreover, the Luo system does not control the noise source itself to cancel the noise. In this regard, Applicant notes that the "noise" recited in claim 11 need not be generated by the

"motor" recited in claim 1; the recited motor can be utilized to cancel noise generated from other sources.

Similarly, Luo neither teaches nor suggests the invention of claim 17 or claim 18. Claim 17 recites "a second code module configured to provide a control signal to the motor in response to the noise measurement to thereby produce a vibration with the motor, wherein the vibration produces a tone configured to cancel at least a portion of the noise at the noise sensor," and claim 18 recites "means for adjusting at least one of the plurality of phases of the control signal to thereby produce a vibration with the motor, wherein the vibration produces a tone that cancels at least a portion of the noise." Luo does not disclose these limitations for the reasons discussed in the immediately preceding paragraph.

Accordingly, for at least the above reasons, Luo does not anticipate any of claims 11, 17, and 18, and Applicant respectfully requests the withdrawal of the §102(e) rejection of those claims.

§103 Rejection

Claims 1-3, 6-10, 12, and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Luo in view of Takeuchi et al., USPN 5,994,868 (hereinafter "Takeuchi"). Claims 1 and 6 are independent, claims 2 and 3 depend from claim 1, claims 7-10 depend from claim 6, and claims 12 and 13 depend from independent claim 11 (discussed above). Applicant traverses this rejection as applied to all of these claims.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify a reference or to combine the teachings of multiple references. Second, there must be a reasonable expectation of success. Third, the prior art must teach or suggest all of the recited claim limitations. Of course, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. Applicant respectfully submits that the Examiner has not met all of the above criteria.

As discussed above in connection with the §102 rejection, Luo fails to teach or suggest the act of controlling a motor for purposes of noise cancellation. This shortcoming of Luo also applies to all of the claims rejected under §103. For example, independent claim 1 recites "a control signal for the motor, wherein the control signal is asymmetric with respect to the at least

one of the plurality of electrical phases to thereby adjust acoustic signals produced by the electric motor," independent claim 6 recites "a control signal to the motor as a function of the noise measurement, wherein the control signal comprises a plurality of phases, each phase corresponding to one of the independently actuatable regions, and wherein the controller is further configured to adjust the plurality of phases with respect to each other to thereby produce acoustic vibrations with the motor," and independent claim 11 was discussed above. None of these limitations are taught or suggested by Luo, and Takeuchi does not overcome the shortcomings of Luo in this regard.

Furthermore, there is no reasonable suggestion or motivation to combine the teachings of Luo and Takeuchi. Takeuchi generally discloses the use of a transfer function for controlling the operation of a motor. As mentioned above, however, Luo is not concerned with motor control or motor adjustment. Rather, the Luo system assumes that the motor is "stably operating and producing a repetitive noise" (paragraph 0018) such that the noise cancellation system can address the motor-generated noise via a separate and distinct speaker or speaker system. Consequently, the use of motor control transfer functions is beyond the practical scope of Luo, and one skilled in the art would have no reason to combine the control transfer functions of Takeuchi with the noise cancellation system of Luo. In fact, variable control of the motor in Luo might render the Luo system inoperable because the Luo system relies on stable constant motor output. Thus, Applicant submits that Luo teaches away from the proposed combination of references.

Accordingly, for at least the above reasons, independent claims 1 and 6 (and dependent claims 2, 3, and 7-10) are not unpatentable over Luo in view of Takeuchi. For the same reasons, claims 12 and 13 (which depend from claim 11) are not unpatentable over Luo in view of Takeuchi. Therefore, Applicant respectfully requests the withdrawal of the §103 rejection of claims 1-3, 6-10, 12, and 13.

In conclusion, for the reasons given above, all claims now presently in the application are believed allowable and such allowance is respectfully requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the undersigned attorney at (480) 385-5060.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

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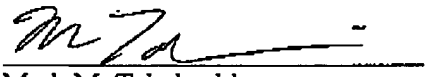
By: 
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